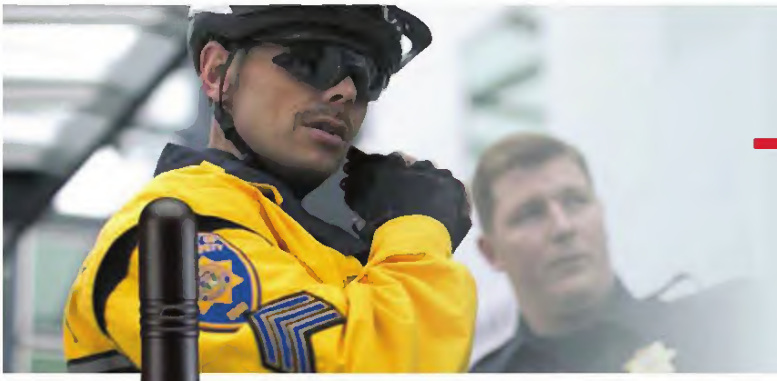
KENWOOD

Listen to the Future

ADVANCED WIRELESS COMMUNICATIONS



TK-2180/3180

VHF/UHF FM Portable Radios

FleetSync® by KENWOOD

GENERAL FEATURES

- S W (136-174 MHz) Models
- 5 W (450-520, 400-470 MHz) Models
- Conventional & LTR® Zones
- 12 Character Alphanumeric Aliases
- Backlit Dot Matrix LCD
- 3-Digit Sub-Display
- Function / Status LCD Icons
- RSSI Indicator
- Date & 12/24 Hour Time Clock
- Transmit / Busy / Call Alert / Warn LED
- 4 Front Panel PF keys
- 2 Side PF Keys
- Orange Emergency / AUX Key
- 12-Key DTMF / PF Keypad[1]
- S00 mW Audio Power
- Enhanced Kenwood Audio
- Companded Audio
- VOX Ready
- Voice Inversion Scrambler Built-in
- Encryption / ANI Board Control
- Easy Option Port
- VGS-1 Voice Guide / Storage Option
- Emergency Call Features
- Emergency Man-Down Option
- DTMF Encode / Decode[2]
- Special Alert Tone Patterns[3]
- Call Key[4]
- Time Out Timer
- Busy Channel Lockout
- LCD Battery Status Indicator
- Low Battery Alert
- Battery Saver

Two models available:
With or without keypad.
(Not actual size proportion)

- Weather-sealed ACC Connector
- MIL-Spec Speaker Mic Option
- Windows® Programming & Tuning[5]
- Windows® Firmware Uploading[5]
- Front Panel Test/Tune
- Cloning
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"
- IP-S4/SS Water & Dust Intrusion
- Intrinsically Safe Option

CONVENTIONAL ZONES

- 512 Channels / 128 Zones[6]
- QT / DQT
- Two-Tone Decode[7]
- Single / Two-Tone Encode[7]
- Operator Selectable Tone[7]
- Dual Priority Scan
- Single & Multi-Zone Scan
- List Scan

TRUNKED ZONES

- 512 GID / 128 Zones[6]
- Kenwood LTR® Features[8]

FleetSync®

- FleetSync® or FleetSync® II[9]
- PTT ID Digital ANI
- Selective Call & Group Call
- Status Messaging
- Emergency Status
- Caller ID Display
- Short Text Messages[10]
- Power On/Off Status Messages
- PC Serial Interface

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Options

- **KNB-31A** Ni-Cd Rechargeable Battery Pack (1700 mAh)
- **KNB-32N** Ni-MH Rechargeable Battery Pack (2500 mAh)
- **KNB-33L** Li-Ion Rechargeable Battery Pack (1700 mAh)
- **KSC-32** Tri-chemistry Rapid Charger
- **VGS-1** Voice Guide & Storage Unit
- **KRA-22** VHF Helical Antenna
- **KRA-23** UHF Helical Antenna
- **KRA-26** VHF Helical Antenna
- **KRA-27** UHF Whip Antenna
- **KRA-16** VHF Stubby Antenna
- **KRA-17** UHF Stubby Antenna
- **KRA-25** VHF High Gain Antenna
- **KMC-25** Speaker Microphone
- **KEP-1** Heavy Duty Earphone
- **KHS-11** 2-Wire Palm Mic with Earphone
- **KHS-12** 3-Wire Mini Lapel Mic with Earphone
- **KHS-14** Lightweight Single Muff Headset
- **KHS-1S-BH** Heavy Duty Behind-the-Head Headset
- **KHS-1S-OH** Heavy Duty Over-the-Head Headset
- **KBH-10** Low Profile Belt Clip
- **KBH-11** Belt Clip (2.5")

All accessories and options may not be available in all markets.
Contact an authorized Kenwood dealer for details and complete list of all accessories and options.

Specifications

Model	TK-2180	TK-3180
GENERAL		
Frequency Range		
Type 1	136-174 MHz	450-520 MHz
Type 2		400-470 MHz
Number of Channels*		
Zone	Max. 128 per Radio	
Ch/GID	Max. 250 per Zones	
	(Max. 512 [Conv. Ch's + GID's] total per Radio)	
Channel Spacing		
Wide	25, 30 kHz	25 kHz
Narrow	12.5, 15 kHz	12.5 kHz
Battery Voltage	7.5 V DC ± 20 %	
Battery Life (5-5-90 duty cycle, during hi-power)		
with KNB-31A (1700 mAh)	Approx. 9 hours	
with KNB-32N (2500 mAh)	Approx. 14 hours	
with KNB-33L (1700 mAh)	Approx. 10 hours	
Operating Temperature Range	-22 °F ~ +140 °F (-30 °C ~ +60 °C)	
	[+14 °F ~ +140 °F (-10 °C ~ +60 °C) when KNB-32N/33L in use]	
Frequency Stability	±0.00025 % (-22 °F ~ +140 °F)	
Antenna Impedance	50 Ω	
Channel Frequency Spread		
Type 1	38 MHz	70 MHz
Type 2		70 MHz
Dimensions (W x H x D), Projections not included		
Radio Only	2-5/16" x 5-3/8" x 7/8" (58 x 136 x 21.5 mm)	
with KNB-31A	2-5/16" x 5-3/8" x 1-9/16" (58 x 136 x 39.5 mm)	
with KNB-32N	2-5/16" x 5-3/8" x 1-9/16" (58 x 136 x 39.5 mm)	
with KNB-33L	2-5/16" x 5-3/8" x 1-5/16" (58 x 136 x 33 mm)	
Weight (net)		
Radio Only	9.17 oz. (260 g)	
with KNB-31A	18.70 oz. (530 g)	
with KNB-32N	19.75 oz. (560 g)	
with KNB-33L	14.1 oz. (400 g)	

Model	TK-2180	TK-3180
GENERAL		
FCC ID		
Type 1	ALH37323110	ALH37333110
Type 2	–	ALH37333120
IC Certification		
Type 1	282D-37323110	–
Type 2	–	282D-37333120
RECEIVER (Measurements made per TIA/EIA-603)		
Sensitivity (12 dB SINAD)		
Wide	0.25 µV	
Narrow	0.28 µV	
Selectivity		
Wide	70 dB	70 dB
Narrow	65 dB	63 dB
Intermodulation Distortion		
Wide/Narrow	70 dB (±50, 100 kHz)	
Spurious Response	70 dB	
Audio Output (8 Ω impedance)	500 mW with less than 3 % distortion	
TRANSMITTER (Measurements made per TIA/EIA-603)		
RF Power Output		
High	5 W	5 W
Low	1 W	1 W
Spurious Response	70 dB	
Type of Emission		
Wide	16K0F3E	
Narrow	11K0F3E	
FM Hum & Noise		
Wide	45 dB	
Narrow	40 dB	
Audio Distortion		
Wide/Narrow	3 %	

Kenwood follows a policy of continuous advancement in development.
For this reason specifications may be changed without notice.

**Maximum capability depends on the number of programmed Zones and repeater channels.*

FleetSync® is a registered trademark of Kenwood Corporation.
LTR® is a registered trademark of Transcrypt International.

Applicable MIL-STD & IP

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures
Low Pressure	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
Humidity	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, II
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
Shock	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV	516.5/Procedure I, IV
International Protection Standard				
Dust & Water Protection	IP54/55			

footnotes from Front:

1. *Keypad models only.*
2. *DTMF includes PTT ID, Emergency ANI, Manual Encode (keypad models), Auto-Dial List (32 numbers 16-Digits each) & Stun.*
3. *Special Alert Tone Patterns operate for 2-Tone, DTMF, FleetSync® selective call decode.*
4. *Call Key: 6 keys max.; operates for 2-Tone, DTMF and FleetSync® status encode.*
5. *KPG-89D required: Windows®98/ NT/ 2000/ MeXP compatible; English/Spanish screen languages.*
6. *Conventional Zones: 512 Channels /128 Zones max. per radio; 250 CH max. per Zone.*
   Trunked Zones: 512 GID / 128 Zones max. per radio; 250 GID max. per Zone.
7. *Two-Tone Decode (4 sets x 4 pairs each); Single / Two-Tone Encode (32 tones), Operator Selectable Tone (40 QT/DQT code pairs).*
8. *Kenwood LTR Features include: GID Delete/Add, LTR Talk Around /Scan Revert Group Display, System Scan, Group Scan, Auto Search.*
9. *FleetSync® & FleetSync® II are not compatible.*
10. *Short Text Messages are radio stored & LCD displayed.*

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